.On the Solution of the Kinetic Equation for the Transfer of Neutrons or γ -
Quanta With the Method of the Partial Probabilities

one. The second part of this paper contains an expression for
the Green (Grin) function of the kinetic equation which has
the form of multiple integrals. The above-mentioned equation is
solved according to the usual method of the successive approxi-
mations which gives the possibility to obtain successively the
solutions after 0, 1, 2 ... $\varkappa$ collisions. In the third part
of this paper the results of the second part are generalized to
an unsteady kinetic equation. Then the author reports on the
solution of the kinetic equation for the transfer of gamma
quanta and for the diffusion of thermal neutrons. This equation
is nearly totally equivalent to that mentioned in the beginning
of this paper. Then the Green (Grin) function for the diffusion
of thermal neutrons is given. The fifth part of this paper
deals with the moderation and diffusion of neutrons in a medium
with constant free path length; it contains (as an example) the
deduction of the exact spatial-ernergy distribution of neutrons
which are moderated in a medium with constant free path length.
The diffusion of thermal neutrons is a special case of the
above-mentioned phenomena. The multiple integration is carried

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SOV/56-34-6-18/51

On the Solution of the Kinetic Equation for the Transfer of Neutrons or γ-Quanta With the Method of the Partial Probabilities

out according to the ordinary operator method and expansion with respect to Legendre (Lezhandr) polynomials is used. The author shows how it is possible to generalize the above-mentioned results to the case of variable free path length. At last the author reports on the hitherto existing methods which according to the author's opinion have the following disadvantages: 1) Their formalism does not correspond to the physical particularities of the phenomenon. 2) This formalism does not give the exact solution as a combination of the hitherto known functions and operators. The method of the partial probabilities introduces (in explicite form) a new physical variable τ the number of the collisions of a particle with the nuclei of the medium, it describes the real physical phenomenon of the successive transfer of neutrons or gamma quanta. There are 7 references, 4 of which are Soviet.

ASSOCIATION: Vol'go-ural'skiy filial VNII Geofiziki (Volga-Ural-Branch of the All-Union Scientific Research Institute of Geophysics)

Card 3/4

SOV/56-34-6-18/51

On the Solution of the Kinetic Equation for the Transfer of Neutrons or γ - Quanta With the Method of the Partial Probabilities

SUBMITTED: December 12, 1957

Card 4/4

BAYEMBITOV, F.G.; GULIN, Yu.A.; DYAD'KIN, I.G.

Determining the height of the rising cement solution in wells
by the data of gamma-gamma logging. Razved.i prom.geofiz.
no.32:38-42 '59.   (MIRA 13:4)
            (Oil well logging, Radiation)

DYAD'KIN, I.G.

[Space-energy angular distribution of neutrons in multi-component unbounded media] Prostranstvenno-energeticheski-uglovoe raspredelenie neitronov v mnogokomponentnykh bez-granichnykh sredakh. Moskva, Glav.upr.po izpol'zovaniiu atomnoi energii, 1960. 27 p.   (MIRA 17:1)

S/089/6ℚ/010/001/001/020
B006/B063

AUTHORS: Dyad'kin, I. G., Batalina, E. P.

TITLE: Change in Time of Spatial and Energy Distributions of
                Neutrons From a Pulsed Source

PERIODICAL: Atomnaya energiya, 1960, Vol. 10, No. 1, pp. 5 - 12

TEXT: This is a theoretical study of the time dependence of spatial and
energy distributions of neutrons emitted by a pulsating source. Such a
problem may arise, e. g., in the geophysical detecting of petroleum
layers. First, the nonsteady equation of motion describing the slowing
down of pulsed neutrons is written and solved, after some transformations,
by the method of stepwise integration. The solution obtained is applied to
calculate the energy distribution, the change in time of spatial and
energy distributions, and the mean square $(\overline{r^2})$ of the slowing down mean
free path. The formulas then obtained are again applied to treat a con-
crete problem with a variable mean free path. The distribution in time
of neutrons of a given energy is shown to follow Poisson's probability
distribution in the whole time interval. It may be seen from the

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Change in Time of Spatial and Energy Distri-   S/089/60/010/001/001/020
butions of Neutrons From a Pulsed Source   B006/B063

correlations found to exist between time, space, and energy distributions
that, in certain distance and time intervals, the space-energy and the
energy-time methods are mutually independent with this method of core
sampling. Outside this interval there is a correlation between the two
distribution functions, which is formulated. The method of core sampling
by means of pulsed neutrons has found wide application in the USSR. The
layer forming the object of investigation is exposed for a short time to
the neutrons emitted by a pulsed generator, after which the neutron
density in the layer is measured for a certain time. Neutron distribution
in space and time $(E_n = 1.5$ ev) was studied in an artificial layer
$(SiO_2 + m\% H_2O)$ as dependent on the water content. Results are shown in a
graph and briefly discussed. There are 2 figures and 9 references:
8 Soviet and 1 US.

SUBMITTED: February 29, 1960

Card 2/2

DYAD'KIN, I. G., Cand. Phys-Math. Sci. (diss) "Spatial-Energy-Angular Distribution of Neutrons in Multiple-Component Environments." Moscow, 1961, 12 pp. (Moscow Engineering-Physics Instit.) 140 copies (KL Supp 12-61, 250).

24.6500

AUTHOR: Dyad'kin, I. G.

TITLE: Solution of Wick's problem and the corresponding partial
            probabilities of neutron transition

SOURCE: : Krupchitskiy, P. A., ed. Neytronnaya fizika; sbornik statey.
            Moscow, 1961, 3-13

TEXT: The collision density $\Psi(R,\mu,u)$ of neutrons which are emitted from
point isotropic and monochromatic sources is expressed by elementary func-
tions. In an earlier paper (ZhETF, $\underline{34}$, 1504 (1958)), this distribution
was found to be equal to

$$\sum_{\alpha=0}^{\infty} \frac{(2a+1)i^a}{2\pi^2 l^3} P_a(\mu) \frac{1}{2\pi i} \int_{c-i\infty}^{c+i\infty} dp\, e^{pu} \int_0^{\infty} k^2 dk \left(\frac{\mathscr{N}}{E-\mathscr{N}}\right)_{oa} \frac{1}{\sqrt{A_a(p)A_o(p)}} J_a^*(kR),$$

where $\mathscr{N}$ is a symmetric infinite matrix, consisting of the elements

$N_{ab} = \sqrt{A_a(p)A_b(p)} \; (1/k)D_{ab}(1/k) \; (D_{ab}(x) = P_a(x)Q_b(x)$ for $b \geqslant a,$

Card 1/3

Solution of Wick's problem ...

$D_{ab}(x) = Q_a(x)P_b(x)$ for $b \leqslant a$). $P_a(x)$ and $Q_a(x)$ are Legendre functions, $J_a^*(y) = \sqrt{\pi/2y}\, J_{a+1/2}(y)$ are Bessel functions, and $A_a(p)$ are the Laplace transforms of the expansion coefficients of the scattering function in a series of Legendre polynomials. The following result is obtained:

$$\left(\frac{\pi}{E-\pi}\right)_{oa} = \frac{(-1)^a \text{minor } \Delta_n(1)}{\Delta_n(1)} - \delta_{oa}, \qquad \text{where}$$

$$\Delta_1(1) = 1 - A_0(p)\frac{\text{arctg } k}{k},$$

$$\Delta_2(1) = \Delta_1(1) + \frac{A_1(p)}{k^2}\left(\frac{\text{arctg } k}{k} - 1\right)[1 - A_0(p)],$$

$$\Delta_3(1) = \Delta_2(1) + \frac{A_2(p)}{4k^2}\left(\frac{3+k^2}{k}\text{arctg } k - 3\right) \times$$
$$\times [-3 - k^2 + 3A_0(p) + A_1(p) - A_0(p)A_1(p)],$$

$$\Delta_4(1) = \Delta_3(1) + \frac{iA_3}{2k^3}Q_3\left(\frac{i}{k}\right) \times$$
$$\times \left[2k^3 P_3\left(\frac{i}{k}\right) + iA_0\left(5k - \frac{4}{3}k^3\right) + \dots\right].$$

(22)

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Solution of Wick's problem ...

33007
S/641/61/000/000/001/033
B112/B138

There are 5 references: 2 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: Wick G. Phys. Rev., 75, 738 (1949). Verde M., Wick G. Phys. Rev., 71, 852 (1947). Marshak R. Rev. Mod. Phys., 19, 185 (1947).

Card 3/3

DYAD'KIN, I.G.; BATALINA, E.P.

Time variation of the space and energy distribution of the neutrons
from a pulsed source. Atom. energ. 10 no.1:5-12 Ja '61.
(MIRA 13:12)

(Neutrons)

24.6500

08/62/000/005/028/119
A001/A101

AUTHOR: Dyad'kin, I. G.

TITLE: The solution of Vick's problem and corresponding partial probabili-
ties of neutron transfer

PERIODICAL: Referativnyy zhurnal, Fizika, no. 5, 1962, 41, abstract 5B325 (V sb.
"Neytron. fizika", Moscow, Gosatomizdat, 1961, 3-13)

TEXT: In correspondence with formulation of Vick's problem it is assumed
that: 1) Medium is infinite, multi-component; 2) the free-path length of
neutrons in the medium is independent of energy; 3) neutron scattering is
symmetrical in the cente of-inertia system; 4) the process is stationary.
Collision probability from a point-like, isotropic and monoenergetic source is
represented in the form of the sum of partial probabilities. The latter are
proportional to probabilities of neutron transfer from one point of phase space
to another after n collisions. Partial probability can be represented by the
double Fourier-Laplace integral of a certain matrix element. Explicit expressions
of these maxtrix elements in terms of elementary functions are found in the
paper by means of matrix calculus formalism. Vick's problem has been solved for

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The solution of Vick's problem ...

S/058/62/000/005/028/119
A001/A101.

the scattering function of any desired degree of approximation. The formulae obtained admit of numerical calculations. If a reasonable number of harmonics in the scattering function is taken, one can dispense with the use of high-speed computers.

β

B Bergel'son

[Abstracter's note: Complete translation]

Card 2/2

32975
S/641/61/000/000/002/033
B112/B138

24.6500

AUTHOR: Dyad'kin, I. G.

TITLE: Distance-angle-energy distribution of neutrons in unbounded
           mediums with more than one component

SOURCE: : Krupchitskiy, P. A., ed. Neytronnaya fizika; sbornik statey.
              Moscow, 1961, 14-29

TEXT: The author derives general expressions for the distance-angle-energy
distribution of neutrons in a medium with more than one component of the
nuclear composition. Cases of low nuclear weights and variable effective
neutron scattering cross-section are taken into account. Together with
two previous papers by the author (ZhETF, 34, 1504 (1958) and the given
volume, page 3), this one contains generalizations of ideas inaugurated by
Plachek (cf. Marshak R. Rev. Mod. Phys., 19, 185 (1947)), H. Bethe (see
below), and M. V. Maslennikov (Doklady AN SSSR, 120, 59 (1958)). The most
important formula is:

$$N(r,\ \Omega,\ u) = \frac{\gamma_{oo}\alpha_0^2 e^{\alpha_0\beta u}}{2\pi^2 v l^2 \sqrt{r^2 l^{-2}+\beta^2 u^2}} K_1(\alpha_0\sqrt{r^2 l^{-2}+\beta^2 u^2}) +$$

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$$+ \sum_{a=1}^{\infty} \frac{\gamma_{0,1} a_a^{2+a} e^{a_a \beta u} (rl^{-1})^{1}}{2\pi^3 v l^2 \sqrt{(r^2 l^{-3} + \beta^2 u^2)^{a+1}}} K_{1+a}\left(a_a \sqrt{r^2 l^{-3} + \beta^2 u^2}\right) \times$$

$$\times p_a\left(\frac{r\Omega}{r}\right)_{u \geqslant 1} \sum_{a=0}^{\infty} \frac{\gamma_{0a} a_a^{2+a} (rl^{-1})^a \exp\left(a_a \beta u - a_a \sqrt{r^2 l^{-3} + \beta^2 u^2}\right)}{2\sqrt{2}\pi\sqrt{\pi} v l^2 \sqrt{(r^2 l^{-3} + \beta^2 u^2)^{a+1/2}}}, \qquad (25)$$

where

$$\gamma_{00} = -\frac{1}{A_0'(0)} = \frac{1}{\xi};$$

$$\gamma_{01} = \frac{1}{\xi\left[1 - \frac{A_1(0)}{3}\right]} = \frac{1}{\xi(1 - \cos\theta)};$$

$$\gamma_{02} = \frac{1}{\xi(1 - \cos\theta)\left[1 - \frac{A_2(0)}{5}\right]} \cdots, \qquad (26)$$

$$\xi = \sum_M C_M \xi_M = \sum_M C_M \frac{2}{M} \times$$

$$\times \left\{1 - \frac{2}{M+1}\left[1 + \frac{3}{5(M+1)} + \frac{8}{15(M+1)^2} + \cdots\right]\right\}; \qquad (27)$$

$$\beta \approx \frac{2}{3a\xi(1 - \cos\theta)},$$

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Distance-angle-energy distribution ...

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and $\overline{\cos\vartheta} = \sum_{M} C_M 2/M$ is the mean scattering cosine. l and $C_M = 1/l_M$ are neutron parameters, $A_a(p)$ are the Laplace transforms of the coefficients of the expansion of the neutron scattering function into a series of Legendre functions. E. Batalina, D. Santo, and A. Gaynanshin are thanked for carrying out the numerical computations, Yu. Gulin, A. Zolotov, V. Zakharchenko, and Yu. Bulashevich for discussing the results of this paper. There are 3 figures, 2 tables, and 11 references: 6 Soviet and 5 non-Soviet. The four most recent references to English-language publications read as follows: Schweber S., Bethe H., Hofman F. Mesons and fields (1957); Verde M., Wick G. Phys. Rev., 71, 852 (1947); Wick G. Phys. Rev., 75, 738 (1948); Bethe H., Tonks L., Hurwitz H. Phys. Rev., 80, 11 (1950).

Card 3/3

REZVANOV, R. A., KANTOR, Solomon A., DURGIK, S. A., DYADKIN, I. G., and KOZHEVNIKOV, D. A.

"Some theoretical problems of neutron well-logging."

report to be submitted for the Conference on Nuclear Geophysics, Krakow, Poland, 24-30 Sept 1962.

(4)

DYAKONIN, I. G., BULASHEVICH, Yu. P. and VOSKOBOYNIKOV, G. M.

(2)

"Some problems in the theory of gamma-gamma logging."

report to be submitted for the Conference on Nuclear Geophysics,
Krakow, Poland, 24-30 Sept 1962.

DYAD'KIN, I.G.; LISENENKOV, A.T.; ZVEREV, G.N.

Mathematical experiment for solving certain geophysical problems.
Izv. AN SSSR. Ser. geofiz. no.11:1694-1698 N '63.   (MIRA 16:12)

1. Volgo-Ural'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo
instituta geofizicheskikh metodov razvedki.

DYAD'KIN, I.G.; LISINENKOV, A.T.

Calculation of a dose of neutrons from a polonium-beryllium
source on the surface of a protective covering of paraffin up
to 60 cm thick. Prikl. geofiz. no.36:233-235 '63.   (MIRA 16:9)
(Neutrons—Scattering)

DYAD'KIN, I.G. (Oktyabr'skiy); LISENENKOV, A.T. (Oktyabr'skiy);
PONYATOV, G.I. (Oktyabr'skiy)

Speeding up the convergence of the Monte Carlo method in solving
radioactive logging problems. Zhur. vych. mat. i mat. fiz. 5
no.4:763-768 Jl-Ag '65.   (MIRA 18:8)

L 22016-66   EWT(d)/T   IJP(c)

AUTHOR: Dyad'kin, I. G. (Ufa); Starikov, V. N. (Ufa)   3 ʹ

TITLE: Possibility of economizing on machine computation time in solving   B
Laplace equations by Monte-Carlo method

TOPIC TAGS: Dirichlet problem, Laplace equation, random walk problem, Monte Carlo
method   16,44,55

ABSTRACT: The random walk method on spheres was used to solve Dirichlet's problem
of three-dimensional Laplace equations in a domain D, bounded by a closed surface
S, on which a potential was given. The essential idea for the two-dimensional case
was described by N. P. Buslenko and Yu. A. Shroeder (Method of statistical tests,
N., Fizmatgiz, 1961.) which was easily generalized for the three-dimensional case,
due to the fact that the potential V at the center of the sphere was related to the
potential $V(\theta, \varphi)$ on the sphere by

$$V = \frac{1}{4\pi} \int_0^\pi \sin\theta\, d\theta \int_\varphi^{2\pi} d\varphi\, V(\theta, \varphi),$$

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L 22016-66

ACCESSION NR: AP5025118

where θ and Ψ were angular coordinates of a point on the sphere. Thus, starting at the point A, it was possible to take the first step with equal probability to any point on the sphere Σ_1 of radius R_1 equal to the minimum distance from A to the surface S. Taking this point for the center of the sphere, the random walk had to be continued on the tangents S of the sphere Σ_1 of radius R_1, i=1,2,... until condition $R_1 < \varepsilon$ was satisfied, where ε was a preassigned small number. The potential of the point of contact of the last Σ_1 with S would then be the random realization of the potential V_A. Orig. art. has: 1 formula and 1 table.

ASSOCIATION: none

SUBMITTED: 25Dec64   ENCL: 01   SUB CODE: /2

NO REF SOV: 002   OTHER: 000

Card 2/2

ACC NR: AR6035369   SOURCE CODE: UR/0271/66/000/009/B007/B007

AUTHOR: Dyad'kin, I. G.; Rizvanova, N. A.; Pogorelova, N. A.

TITLE: Random-number algorithms for the "Razdan-2" computer

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychilitel'naya tekhnika, Abs. 9B44

REF. SOURCE: Uch. zap. Bashkirsk. un-t, vyp. 20, 1965, 132-139

TOPIC TAGS: random-number-generator, algorithm, computer-component, digital, computer, computer programming/Razdan-2 computer

ABSTRACT: Four algorithms and programs for obtaining pseudorandom numbers for the "Razdan-2" digital computer are described. Results of a check on the algorithms for periodicity and randomness are given. 4 tables. Bibliography, 4 titles. G. V.

SUB CODE: 09

Card 1/1   UDC: 518.5:681.142.32.001

DYAD'KIN, K.P., kandidat meditsinskikh nauk

Aid of medical institutes to organs of public health. Sov. zdrav.
13 no.3:33-36 My-Je '54.   (MLRA 7:8)

1. Zam. nachal'nika Upravleniya uchebnymi zavedeniyami Ministerstva
zdravookhraneniya RSFSR.
        (PUBLIC HEALTH,
            *in Russia, aid by med. institutes to local branches of
            pub. health)

DYAD'KIN, K.P., dotsent [deceased]

Novocaine therapy in visceral pain syndromes as clinic treatment of internal diseases. Sov.med. 21 no.5:88-93 My '57. (MLRA 10:7)
(PROCAINE, admin.
in visceral pain synd., various methods)

TROYNIN, Mitrofan Fedorovich; USHAKOV, Nikolay Stepanovich; DYAD'KIN,
Ye.I., inzh., retsenzent; VEREVKIN, N.S., kand.tekhn.nauk,
red.; DUDUSOVA, G.A., red.izd-va; SHCHETININA, L.V., tekhn.red.

[Electric trucks] Elektrokary. Moskva, Gos.nauchno-tekhn.
izd-vo mashinostroit.lit-ry, 1960. 155 p.   (MIRA 13:10)
          (Industrial electric trucks)

DYAD'KIN, Yu. D.

DYAD'KIN, Yu. D.: "The conditions of thermal exchange in the purification chambers
    of underground mines as a basis for selecting the system of cooling mine air".
    Leningrad, 1955. Min Higher Education USSR. Leningrad Order of Lenin and
    Order of Labor Red Banner Mining Inst, Chair of Working Stratified Deposits.
    (Dissertations for the Degree of Candidate of Technical Sciences.)

So: Knizhnaya letopis' No. 49, 3 December 1955. Moscow.

DYAD'KIN, Yu.D., kand.tekhn.nauk

Methods of thermal calculation of mine air. Nauch. dokl. vys.
shkoly; gor. delo no.1:115-125 '58.   (MIRA 11:6)

1.Predstavlena Leningradskim gornym institutom.
          (Mine ventilation) (Temperature)

DYAD'KIN, Yu.D.

Practical system of cooling mine air. Zap. LGI 38 no.1:123-138
1959   (MIRA 14:3)
    (Donets Basin--Coal mines and mining--Air conditioning)

DYAD'KIN, Yu.D.

Length of stoping faces in deep mines in the Donets Basin.
Zap. LGI 38 no.1:139-156 1959   (MIRA 14:3)
          (Donets Basin—Stoping (Mining))

DYAD'KIN, Yu.D., kand.tekhn.nauk

Method of selecting a face length with calculation of the heat
factor. Izv.vys.ucheb.zav.; gor.zhur. no.2:5-10 '60. (MIRA 14:5)

1. Leningradskiy gornyy institut.
                              (Mining engineering)

MUSTEL', P.I.; DYAD'KIN, Yu.D.; BOKIY, B.V.; KELL', L.N.; KOMAROV, V.B.;
      SEMEVSKIY, V.N.; BORISOV, D.F.; GOLOVIN, G.M.; USEVICH, I.V.;
      DUBRAVA, T.S.; SHABLYGIN, A.I.; ZOLTOLAREV, N.D.; GALAYEV, N.Z.;
      SIGACHEV, A.Ye.; PANENKOV, Yu.I.; SENUK, D.P.; KOPYLOVA, Ye.V.

      Pavel Ivanovich Gorodetskii; an obituary. Gor zhur. no.5:77 My '60.
                                                          (MIRA 14:3)

            (Gorodetskii, Pavel Ivanovich, 1902-1950)

DYAD'KIN, Yu.D., kand.tekhn.nauk

Heat factor calculation in planning deep mines. Trudy Sem.po
gor.teplotekh. no.3:47-56 '61.   (MIRA 15:4)

1. Leningradskiy gornyy institut.
                    (Mine ventilation)

DYAD'KIN, Yu.D.

Expediency and ways of increasing the load on a layer in deep
Donets Basin mines. Zap. LGI 46 no.1:85-90   '62.
(MIRA 16:6)
(Donets Basin—Mine ventilation)

DYAD'KIN, Yu. D., dotsent

Features of the heat conditions of mines in the permafrost zone. Izv. vys. ucheb. zav.; gor. zhur. 5 no.8:82-88 '62.
(MIRA 15:10)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni gornyy institut imeni G. V. Plekhanova. Rekomendovana kafedroy razrabotki plastovykh mestorozhdeniy.

(Mine ventilation)
(Noril'sk region—Frozen ground)

DYAD'KIN, Yu.D.; MODESTOV, Yu.A.; KAREPIN, B.G.; VESTERMAN, G.M.

Operation of a protective shield under the effect of impact
loads in free roof caving. Zap. LGI 48 no.1:64-72 '63.

(MIRA 17:8)

DYAD'KIN, Yu.D., kand. tekhn. nauk, otv. red.; ZIL'BERBORD, A.F.,
kand. tekhn. nauk, otv. red.

[Thermal and mechanical processes in mining minerals; min-
ing operations in a massif of frozen ground] Teplovye i me-
khanicheskie protsessy pri razrabotke poleznykh iskopaemykh;
gornye raboty v massive merzlykh porod. Moskva, Nauka,
1965.   266 p.   (MIRA 18:5)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut
merzlotovedeniya. 2. Institut merzlotovedeniya Sibirskogo
otdeleniya AN SSSR (for Zil'berbord). 3. Leningradskiy gor-
nyy institut (for Dyad'kin).

DYAD'KINA, I.Ya.

Quartz genesis in the large quartz lode of the Dagestan Nukatl'
Range. Sbor.nauch.rab.stud. LGI   no.2:34-41 '57.
(MIRA 13:4)

1. Leningradskiy ordenov Lenina i Trudovogo Krasnogo Znameni
gornyy institut im. G.V.Plekhanova. Predstavlenc prof, D.P.
Grigor'yevym.
(Nukatl' Range—Quartz)

DYAD'KINA, I.Ya.

Morphology and properties of muscovite crystals in the Slyudyanogorsk deposit (Central Urals). Zap.Vses.min.ob-va 93 no.6:662-671 '64.

(MIRA 18:4)

DYAD'KINA, I.Ya.

Conditions governing the formation of muscovite in the Slyudyano-gorsk deposit. Trudy VSEGEI 108:23-35 '64.

(MIRA 18:2)

ACC NR: AP7000535   SOURCE CODE: UR/0386/66/004/010/0396/0400
32

AUTHOR: Volkenshteyn, N. V.; Dyakina, V. P.

ORG: Institute of Physics of Metals, Academy of Sciences SSSR (Institut fiziki metallov Akademii nauk SSSR)

TITLE: Singularities of transverse magnetoresistance of single-crystal gadolinium

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 10, 1966, 396-400

TOPIC TAGS: gadolinium, magnetoresistance, galvanomagnetic effect, temperature dependence, magnetic structure

ABSTRACT: The purpose of the investigation was to ascertain the effect of a change in the magnetic structure on the anisotropy of the transverse magnetoresistance of single-crystal gadolinium in a wide range of temperatures. The tests were made on cylindrical samples cut along the $[10\bar{1}0]$ axis, with a ratio of room-temperature resistance to helium-temperature resistance equal to 20. The isotherms of the transverse magnetoresistance were measured in fields sufficient to produce saturation and extrapolated to zero field in the sample, so as to exclude the resistance variations due to the paraprocess. The tests showed that the transverse saturation magnetoresistance has a complicated temperature dependence and is strongly anisotropic. From the measured temperature dependence of the transverse saturation magnetoresistance in fields parallel to [0001] and $[11\bar{2}0]$ it is deduced that the magnetic anisotropy con-

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L. 10945-67

ACC NR: AP7000535   ○

stant has a maximum near 120K and vanishes at 230K. Rotation diagrams show that above
250K the transverse magnetoresistance is negative in all directions, and its absolute
value is minimal in the easy-magnetization direction. Below 130K, the rotation curves
show maxima connected with the appearance of the "cone" of easy magnetization axes.
The results show also that a correlation exists between the temperature dependence of
the galvanomagnetic effect and the magnetic structure. Orig. art. has: 3 figures.

SUB CODE: 20/   SUBM DATE: 06Aug66/   ORIG REF: 003/   OTH REF: 002

Card 2/2

DYAD'KOV, A.M.

112-3-5958

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 3, pp. 129-130

AUTHOR: Dyad'kov, A.M.

TITLE: Broadening the Field of Application of Power Regeneration in Electric Railroads (O rasshirenii sfery primeneniya rekuperatsii energii na elektricheskikh zheleznykh dorogakh)

PERIODICAL: Sb. nauch. tr. Tomskiy elektromekhan. in-t inzh. zh.-d. transp., 1955, Vol. 21, pp. 36-42

ABSTRACT: The advantages of power regeneration in electrified railroads are listed, and its greatly limited application in practice is noted. This situation is due to the existing opinion that power regeneration can be applied only in sections of the railroad where the direct-current traction substations are provided with converters able to absorb the power regenerated by the locomotives. At the present time, only the motor-generator fulfills the function of

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112-3-5958

Broadening the Field of Application of Power in Regeneration in
Electric Railroads

such a converter. Since the mercury-arc rectifier has
many advantages over the motor-generator, however, recti-
fiers are used in substations for all level stretches of
railroad giving up the regenerative braking. Meanwhile,
according to computations and experimental data, surplus
power (power not used by other electric locomotives)
comprises only 3-3.5% of all the regenerated power.
Further analysis of electric railroad operation showed
that the use of regenerative braking should not be re-
jected oh the basis of absence of inverters or units
absorbing power in the substations, since in many cases
the surplus power can be reduced to zero. To this end,
it is necessary to develop measures of an organizational
and technical nature: compiling of computations sub-
stantiating the technical possibility and economic
expediency of power regeneration for a given stretch of
railroad; developing technological techniques for control
of trains (establishing the locations where regeneration
could be applied, positioning the brake handle in the
locomotive, etc.); training locomotive engineers for
optimum application of power regeneration to control

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Broadening the Field of Application of Power in Regeneration in Electric Railroads

of locomotives, etc.). In the event computations indicate that there are advantages to employing power regeneration, and at the same time a surplus of regenerated power will appear, the use of air braking should be considered in certain cases. If the graphic timetable of the train is seriously affected, then regenerative braking must be rejected at this time, which should not cause difficulties if the locomotive engineer has radio contact with the power dispatcher and the train schedule dispatcher.

I.V.I.

ASSOCIATION: Tomsk Electro-Mechanical Institute for Railroad Engineering (Tomskiy elektromekhan. in-t inzh. zh.-d. transp.)

Card 3/3

ROZENFEL'D, Vitaliy Yevgen'yevich; ISAYEV, Igor' Petrovich; SIDOROV,
Nikolay Nikolayevich; DYAD'KOV, A.M., kand. tekhn. nauk,
retsenzent; KALININ, V.K., kand. tekhn. nauk, red.; BOBROVA,
Ye.N., tekhn. red.

[Electric traction]Elektricheskaia tiaga. Moskva, Transzheldoriz-
dat, 1962. 346 p.   (MIRA 16:1)
        (Electric railway motors)

DYAD'KOV, A.M., kand. tekhn. nauk, dotsent

Roller station for stationary testing of electric locomotives.
Trudy Ural. elektromekh. inst. inzh. zhel. dor. transp. no.5:
115-126 '62.   (MIRA 17:8)

DYAD'KOV, A.M.

AUTHOR: None Given   3-58-4-21/34

TITLE: A Conference of Readers of "Vestnik Vysshey Shkoly" in Sverd-
               lovsk (Konferentsiya chitateley "Vestnika vysshey shkoly"
               v Sverdlovske)

ABSTRACT: The article contains criticism of professors and high
               school teachers in Sverdlovsk on the contents of this perio-
               dical.
                   Professor P.Z. Petukhov of the Ural'skiy politekhnicheskiy
               institut (Ural Polytechnical Institute) pointed out that the
               journal plays up the positive experience more than the defi-
               ciencies of the higher schools.
                   Professor A.Ye. Trop of the Sverdlovskiy gornyy institut
               (Sverdlovsk Mining Institute) complained that the editor,
               when publishing controversial material, does not give his
               opinion.
                   Dotsent A.M. Dyad'kov of the Elektromekhanicheskiy institut
               inzhenerov zheleznodorozhnogo transporta (Electromechanical
               Institute of RR Engineers) dealt with the problems of a more
Card 1/2   precise organization of the higher school work.

3-58-4-21/34

A Conference of Readers of "Vestnik Vysshey Shkoly" in Sverdlovsk

Professor Z.V. Gorbunova of the Sverdlovskiy meditsinskiy institut (Sverdlovsk Medical Institute) spoke on the same subject.

The graduate student, Ye.I. Kazantsev, of the Ural Polytechnical Institute suggested that a special section of the journal be devoted to articles on the work of the Party, Profsoyuz and Komsomol organizations of vuzes.

Dotsent P.O. Kosyakov of the Sverdlovskiy yuridicheskiy institut (Sverdlovsk Law Institute) pointed to the section "From the Practice of the Chair of Social Sciences", which contains material of benefit to the chairs, and expressed the wish that this section be developed.

Professor N.I. Reshetin of the Ural Polytechnical Institute spoke on the problems raised by "Letter I-100". Other speakers came forward with critical remarks on the form of contact between editor and reader, on the reviewing of articles, etc.

The editorial staff of the journal has studied the remarks and is adopting the recommendations.

AVAILABLE: Library of Congress
Card 2/2

DYAD'KOV, A.M., kand. tekhn. nauk, dotsent; KUIMOV, V.I., inzh.
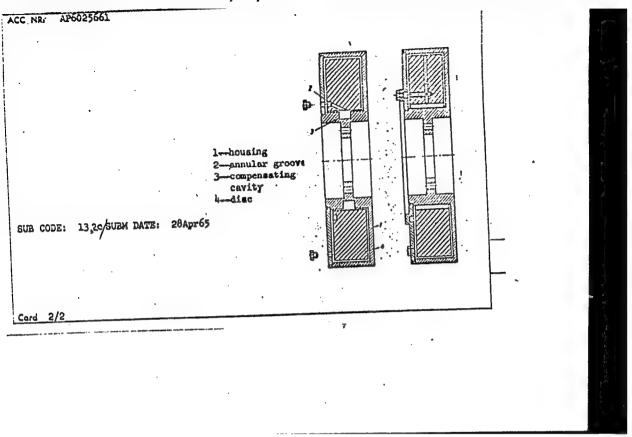
Traction characteristics of electric locomotives with compound excitation. Trudy Ural. elektromekh. inst. inzh. zhel. dor. transp. no.5:78-90 '62.   (MIRA 17:8)

ABRAKOV, L.V.; BARANOVA, A.G.; DYMARSKIY, L.Yu.; DYAD'KOVA, A M.;
RABKOVA, L.M.; RAKOV, A.I.; SEREBROV, A.I.; SMIRNOVA, I.N.;
KHOLDIN, S.A.; TSEL', Ye.A.; CHEKHARINA, Ye.A.; SHABASHOVA,
N.Ya.; SHANIN, A.P.

Il'BENSKIY A.V.

ACC NR: AP6025661   (A)   SOURCE CODE: UR/0413/66/000/013/...

INVENTOR: Venediktov, V. A.; Vasil'yev, Yu. A.; Popov, N. I.; Markelov, Ye. V.; Veynblat, M. Kh.; D'yakov, A. P.; Shishakov, K. I.; Yusim, L. Ya.; Skvortsov, A. M.; Kireyev, Yu. A.; Guzanov, G. N.; Gerasimovich, S. G.

ORG: None

TITLE: A fluid device for damping torsional vibrations. Class 47, No. 183539 [announced by the Turbine Motor Plant (Turbomotornyy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 126-127

TOPIC TAGS: vibration damping, hydraulic device, torsional vibration

ABSTRACT: This Author's Certificate introduces a fluid device for damping torsional vibrations. The unit consists of a housing with a hole for fluid delivery and a movable annular disc with a compensating cavity set inside the housing. The installation is designed for more reliable and simpler filling of the unit with fluid by providing the faces of the disc or the internal surface of the housing opposite the hole for fluid delivery with at least one annular groove connected to the compensating cavity by channels in the disc body.

UDC: 621-752.2

Card 1/2

ACC NR: AP6025661

1—housing
2—annular groove
3—compensating
   cavity
4—disc

SUB CODE: 13,2c/SUBM DATE: 28Apr65

Card 2/2

DYADKOV, S.

DYADYOV, S.

    Fysikalni zaklady elektrickych a elektronickych mereni. _Vyd. 1_/ Fraha, Statni pedagogicke nakl., 1953. (Ucebni texty vysokych skol)_ _/Physical Fundamentals of Electric and Electronic Measurements. Vol. 2 diagrs._/

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 4,
      April 1954. Unclassified.

DYADKOV, SERGEY-DR.

       "Riflessioni di onde ultracorte per discontinuita della pressione di vapore nella troposfera" and "Analogia per la trasformazione di (Fourier) e metodo meccanico per la rappresentazione del processo di intergazione" - Papers submitted at the Third International Congress and Exhibition of Electronics and Nuclear Energy, Rome, Italy, 22 June7 Jul 57.

9.3200 (1147, 1161)

AUTHOR: Dyad'kov, S.

TITLE: Resonant transforms and their properties

PERIODICAL: Radiotekhnika i elektronika, Vol.6, No.4, 1961,
            pp.568-578

TEXT: The article constitutes a resume of the author's
previously published work (Refs. 1, 2 and 4). Transforms of the
form

$$D_\omega(t) = \int_0^t f'(\tau)\ e^{-j\omega\tau}\ d\tau \text{ and } F_\omega(t) = \int_0^t f(\tau)\ e^{-j\omega t}\ d\tau$$

and their images in the complex plane are discussed. The purpose
of the article is to popularise these theorems without presenting
any new original results. It is shown that these transforms can
be applied for representing the oscillation process in a loss-free
circuit, to the input of which a voltage is fed which corresponds
to the investigated function $f(\tau)$ and the resonant frequency of
which is equal to the frequency of the transform ω.   These

Card 1/2

22894

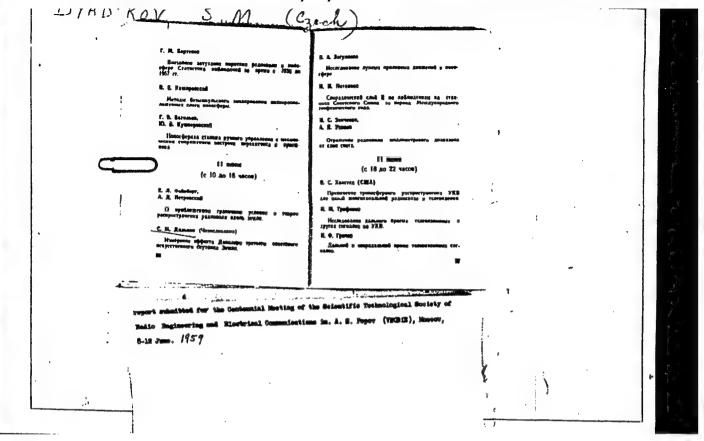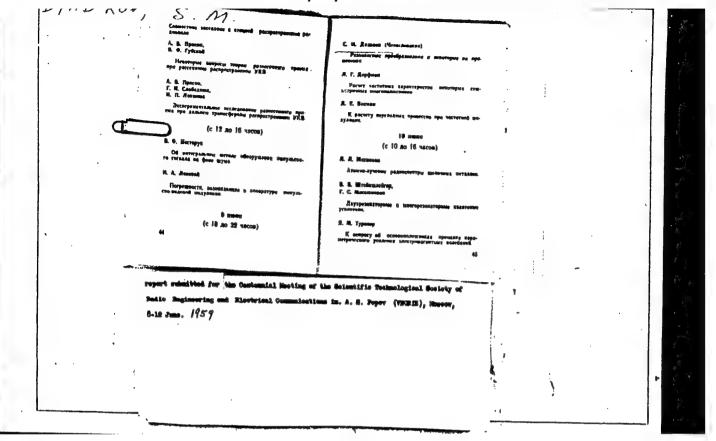Resonant transforms and ...   S/109/61/006/004/008/025
                                            E140/E135

transforms can also be applied for circuits with losses and non-linear resistances. In the final part of the paper applications of the resonant transform to the solution of transient processes are outlined.   There are 9 figures and 5 references: 4 Soviet-bloc and 1 German.

SUBMITTED: May 13, 1960

Card 2/2

LTAD KOV S. M. (Czech)

Г. М. Бартенев

[illegible Russian text]
1957 г.

В. В. Кашпровский

[illegible Russian text]

Г. В. Загалов,
Ю. В. Куликовский

[illegible Russian text]

II полоса
(с 10 до 16 часов)

Е. Л. Фейнберг,
А. Л. Петровский

[illegible Russian text]

С. М. Длямов (Чехословакия)

[illegible Russian text]

В. А. Загунов

[illegible Russian text]

И. И. Потемин

[illegible Russian text]

В. С. Зоткин,
А. Л. Утлов

[illegible Russian text]

II полоса
(с 16 до 22 часов)

В. С. Хонтон (США)

[illegible Russian text]

П. И. Трофимов

[illegible Russian text]

В. Ф. Пучков

[illegible Russian text]

report submitted for the Centennial Meeting of the Scientific Technological Society of

Radio Engineering and Electrical Communications im. A. S. Popov (VNORIE), Moscow,

8-12 June 1959

Д... ..., S. M.

Совместное заселение с стенкой распространения радиоволн

А. В. Просин,
В. Ф. Губиной

Некоторые вопросы теории релеевского приема при растеканом распространении УКВ

А. В. Просин,
Г. Н. Слободяик,
Н. П. Левшина

Экспериментальное исследование релеевского приема при дальнем тропосферном распространении УКВ

(с 12 до 16 часов)

В. Ф. Истерук

Об интегральном методе обнаружения импульсного сигнала на фоне шума

Н. А. Левшей

Погрешность, возникающая в аппаратуре импульсно-кодовой модуляции

9 июня
(с 10 до 22 часов)

44

С. И. Демьян (Чехословакия)

Резонансные преобразователи и некоторые их применения

А. Г. Дорфман

Расчет частотных характеристик некоторых спектральных многополюсников

А. С. Вогман

К расчету переходных процессов при частотной модуляции

10 июня
(с 10 до 16 часов)

А. А. Магазов

Атомно-лучевые радиоспектры щелочных металлов

В. В. Штейнъедер,
Г. С. Максименко

Двухрезонаторные и многорезонаторные квантовые усилители

В. М. Турков

К вопросу об относительных процессах параметрического усиления электромагнитных колебаний

45

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNKRS), Moscow, 8-12 June, *1959*

16,4200

S/194/62/000/010/001/084
A154/A126

AUTHOR: Dyad'kov, Sergey

TITLE: Elastic models of resonance transformations and Fourier transformations

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 10, 1962,
3 - 4, abstract 10-1-5ya (Některé probl. z teorie obvodu. Praha,
ČSAV, 1961, 109 - 138; summaries in Czechoslovakian, English and
German)

TEXT: The work gives the determination of the resonance transformation of
a given process, and the connection between the resonance-transformed functions
and the spectral functions of this process, as well as their relations to vary-
ing current and voltage amplitudes in an oscillation circuit whose input value
is determined by the given process. A description is given of the main geomet-
rical properties of images of resonance-transformed functions, which are con-
stancy of the image length and the dependence of the curvature radius on the an-
gular transformation frequency. These properties are similar to the properties

Card 1/2

Elastic models of resonance transformations ....

S/194/62/000/010/001/084
A154/A126

of the bending line of elastic plates, and can, therefore, be used in designing elastic models of the given process; with the aid of such models the resonance- -transformed and spectral functions of the process can be determined. A method is given for calculating and designing the elastic models, and instruments are described in which the models can be used. Methods are given for simulating spectral functions and for solving the Fourier integral with the aid of elastic models.

Z.G.

[Abstracter's note: Complete translation]

Card 2/2

S/044/63/000/001/008/053
A060/A000

AUTHOR: Dyad'kov, Sergey

TITLE: Elastic analogs of resonance transforms and Fourier transforms

PERIODICAL: Referativnyy zhurnal, Matematika, no. 1, 1963, 11, abstract 1B56
            (Některé probl. z teorie obvodů, Praha, ČSAV, 1961, 109 - 138;
            summaries in Czech, English, German)

TEXT: The author studies the analogy between the Fourier transform and the
relation existing between the electromotive force applied to a series oscillating
circuit and the potential across the inductance. Elastic analogs of spectral
functions are also cited. The indicated analogies make it possible to establish
certain useful properties of a transform.

P.I. Kuznetsov

[Abstracter's note: Complete translation]

Card 1/1

D'YADKCV, V. G.

"Coefficients of Friction and Their Dependence on the Direction of Movement." Sub 20 Dec 51, Moscow Order of Labor Red Banner Inst of Steel imeni I. V. Stalin

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

DYAD'KOVÁ, A. M.

PA 1/50755

USSR/Medicine - Tumors   Jul/Aug 49
                    Blastogenic Substances

"An Attempt in the Isolation of the Malignant
Agent From Tumors Caused by Blastogenic Sub-
stances," A. M. Dyad'kova, Lab of Endogenic
Factors, Inst of Oncol, Leningrad, 3½ pp

"Arkh Patol" No 4, pp 23-26.

In experimenting with rats, author did not succeed
in isolating the malignant agent from tumors
caused by blastogenic substances and does not
consider this factor an exogenic cause. Data
obtained agree with results of experiments by

USSR/Medicine - Tumors (Contd)   Jul/Aug 49

Zil'ber. This problem and the nature of this
factor require further study. Sci Dir, Lab
of Endogenic Factors: L. M. Shabad, Corr Mem,
Acad Med Sci USSR. Dir, Inst of Oncol: A. I.
Serebrov, Corr Mem, Acad Med Sci USSR.

1/50755

1/50755

DYAD'KOVA, A. M.   Jun 53

USSR/Medicine – Cancer

"The Problems of the Detection of Specific Antigens in Some Tumors of Animals and

Human Beings," A. M. Dyad'kova, Lab of Expl Cancer, Inst of Oncology, Acad Med Sci,

USSR

Zhur Mikro, Epid, i Immun, No 6, pp 70-73

L.A. Zil'ber's method for detecting specific tumor antigens by producing anaphylaxis
desensibilization was checked. The presence of specific antigens was established
by this method in the following type tumors: Brown-Pierce cancer of rabbits,
rabbit cancer produced by 9, 10-dimethyl-1,2-benzanthracene, spontaneous adeno-
carcinoma of mice, and human cancer of the breast. Both active and passive
sensibilization were used prior to desensibilization.

267T30

DYAD'KOVA, A.M.

DYAD'KOVA, A.M.

Blastomogenic effect of 9,10-dimethyl-1,2-benzanthracene on rats.
Trudy AMN SSSR 21 no.4:141-149 '52.   (MIRA 10:8)

1. Iz laboratorii po izucheniyu kantserogennykh veshchestv (nauchn.
rukov. - chlen-korrespondent AMN SSSR prof. L.M.Shabad) Instituta
onkologii AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof. A.I.
Serebrov)
        (BENZANTHRACENTES, effects,
          9,10-dimethyl-1,2-benzanthracene, blastomogenic action)
        (CARCINOGENS,
          9,10-dimethyl-1,2-benzanthracene)

DYAD'KOVA, A. M.

GEL'SHTEYN, V.I.; DYAD'KOVA, A.M.

Further data on oncologic characteristics of laboratory brown
mice of the CC_{57} line. Vop.onk.1 no.2:32-39 '55. (MLRA 9:1)

1. Iz laboratorii eksperimental'noy onkologii (zav. Chl.korr.
AMN SSSR prof. L.M.Shabad) Instituta onkologii AMN SSSR (dir.
Chl.korr. AMN SSSR prof. A.I.Serebrov)
        (NEOPLASMS, experimental,
            oncol.characteristics of brown mice CC_{57})
        (MICE,
            brown mice CC_{57}, oncol.characteristics)

DYAD'KOVA, A.M.   (Leningrad, Kolpinskaya ul., d.27, kv. 21)

Experimental morphological investigations of various stages of
development of filtrable fowl sarcoma. Vop.onk. 1 no.4:12-21 '55.

(MLRA 10:1)

1. Iz laboratorii eksperimental'noy onkologii (zav. chlen-korr. AMN
SSSR prof. L.M.Shabad) Instituta onkologii AMN SSSR (dir. chlen-korr.
AMN SSSR prof. A.I.Serebrov)

      (SARCOMA, experimental,
         chicken filtrable sarcoma, histol. aspects of various
         stages of develop.)
      (NEOPLASMS, experimental,
         sarcoma, chicken filtrable, histol. aspects of various
         stages of develop.)

DYADKOVA, A. M.

1029.   *The cancer characteristics of mice of the low-cancer strain 'S, Black'* (Russian text)
DYADKOVA A. M. and MEDVEDEV N. N. Inst. of Oncol., USSR Acad. of Med. Sci.,
Leningrad *Vop. Onkol.* 1956, 2/2 (201–203)

In 9 yr. 28 generations (from the 58th to the 86th) of 'S, Black' mice were reared in
the experimental cancer laboratory of the above-mentioned institute. In this period,
autopsy was performed on 385 mice, the ages of which ranged from 4 to 24 months.
Only one male had cancer of the skin. No other form of cancer, not even breast can-
cer, was noted.   Prigozhina – Moscow

NECHAYEVA, I.D.; DYAD'KOVA, A.M.; GORYUKHINA, T.A.; TSEL', Ye.A. (Adres
avtorov: Leningrad, 129, 2-ya Berezovaya alleya, dom, 3. Institut
Onkologii Akademii meditsinskikh nauk SSSR.

Tenth session of the Academy of Medical Sciences of the U.S.S.R.
Vop.onk. 2 no.4:493-502 '56.   (MIRA 9:12)

1. Institut Onkologii Akademii meditsinskikh nauk SSSR.
    (CANCER)

DYAD'KOVA, A.M. (Leningrad, 110, Kolpinskaya, ul., d. 27, kv. 21.)

Chicken lymphomatosis and its relation to sarcomatosis [with
summary in English] Vop. onk., 2 no.6:664-670 '56 (MLRA 10:4)

1. Iz laboratorii eksperimental'noy onkologii (zav.-chl.-korr.
AMN SSSR prof. L.M. Shbad) Instituta onkologii AMN SSSR (dir.-chl.-
korr. AMN SSSR prof. A.I. Serebrov)
        (FOWLS, DOMESTIC, dis.
            lymphomatosis in chickens, relation to sarcomatosis)
        (LYMPHOMA
            avian lymphomatosis in chickens, relation to sarcomatosis)
        (SARCOMA
            sarcomatosis in chickens, relation to avian lymphomatosis)

Dyad'kova, A.M

VOL'FSON, N.I.; DYAD'KOVA, A.M.; KOROSTELEVA, T.A.; SHABAD, L.M.

Examination of the possible blastomogenic activity of extracts from
tumor tissues. Vop.onk. 3 no.5:540-546 '57.   (MIRA 11:2)

1. Iz laboratorii eksperimental'noy onkologii (zav. - chl-korr.
AMN SSSR prof. L.M.Shabad) Instituta onkologii AMN SSSR (dir. -
deyatv. chl. AMN SSSR prof. A.I.Serebrov). Adres avtorov:
Leningrad, P-129, 2-ya Berezovaya alleya, d.3, Institut onkologii
AMN SSSR.
          (NEOPLASMS, exper.
               transpl. in animals with human tumor extracts)

DYAD'KOVA, A.M.

    Detection of specific antigens in filterable and nonfilterable chicken sarcoma by precipitation in agar. Vop. onk. 5 no.12:648-654 '59.
                                  (MIRA 13:12)
      (ANTIGENS AND ANTIBODIES)   (TUMORS)

DYAD'KOVA, A.M.

Comparative studies on chicken sarcoma antigens by means of the agar precipitation method. Vop. onk. 6 no. 11:60-66 N '60.

(MIRA 14:1)

(TUMORS)

DYAD'KOVA, A. M.

Cultivation of Rous sarcoma virus and of tissues of various
chicken sarcomas in chick embryos. Vop. onk. 8 no.7:15-24 '62.
(MIRA 15:7)

1. Iz laboratorii eksperimental'noy onkologii (zav. - zasl.
deyat. nauki, prof. N. V. Lazarev) Instituta onkologii AMN SSSR
(dir. - deystv. chl. AMN SSSR, prof. A. I. Serebrov)

(TISSUE CULTURE) (VIRUSES) (CANCER RESEARCH)

DYAD'KOVA, A.M.; LOTOSH, Ye.A.

Oncological characteristics of a new line of laboratory mice.
Vop. onk. 8 no.11:46-47 '62.   (MIRA 17:6)

1. Iz laboratorii eksperimental'noy onkologii (zav.- zasluzhennyy
deyatel' nauki prof. N.V. Lazarev) Instituta onkologii AMN SSSR
(dir.- deyatvitel'nyy ohlen AMN SSSR, prof. A.I. Serebrov).

VOL'FSON, N.I.; DYAD'KOVA, A.M.

Some results of the work of methodological and theoretical conferences and methodological seminars of the Institute of Oncology of the Academy of Medical Sciences of the U.S.S.R. Vop. onk. 11 no.5:117-119 '65.   (MIRA 18:8)

1. Iz Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.Serebrov).

DYADKOVICH, M., inzh. (Chekhoslovatskaya Respublika).

Mechanized mining of very thin coal seams of Ostrava-Karvina coal-
fields in Czechoslovakia. Izv. vys. ucheb. zav.; gor. zhur. no.2:
12-20 '58.   (MIRA 11:5)
                    (Czechoslovakia--Coal mines and mining)
                         (Coal mining machinery)

DIAD'KOVSKII, Iustin Evdokimovich, 1784-1841

Works; problems of general pathology
Moskva, Medgiz, 1954. 390p.

RB6. D52

1. Pathology- Collected works.

DYADYUSHA, G.G.

Electronic spectra and structure of symmetrical organic
compounds. Part 3: Substitutions in chromophore of sym-
metrical polymethine dyes. Ukr. khim. zhur. 31 no. 11:
1171-1177 '65   (MIRA 19:1)

1. Institut khimii vysokomolekulyarnykh soyedineniy AN
UkrSSR.

DYADYUSHA, G.G.

Electronic spectra and structure of symmetrical organic
compounds. Part 4: Assymetrical dyes as derivatives of
symmetrical ones. Ukr. khim. zhur. 31 no. 12:1293-1301
'65
(MIRA 19:1)

1. Institut khimii vysokomolekulyarnykh soyedineniy AN
UkrSSR. Submitted May 14, 1964.

DYADYK, I.; BARANENKO, I.

For the shortest workday in the world. Sov.profsoiuzy 16
no.10:24-27 My '60. (MIRA 13:6)

1. Predsedatel' Stalinskogo soveta narodnogo khozyaystva (for
Dyadyk). 2. Sekretar' Stalinskogo oblastnogo soveta profsoyuzov
(for Baranenko).
                    (Stalino Province—Hours of labor)

SOV/96-58-9-16/21

AUTHORS: Dyadyakin, B.V. (Engineer) and Lel'chuk, V.L. (Candidate of Phys.Math. Sciences)

TITLE: Heat-transfer from the Walls to a Turbulent Flow of Air in a Tube with Large Temperature Differences, and a Method of Calculating the Wall Temperature (Teplootdacha ot stenki k turbulentnomu potoku vozdukha vnutri truby pri bol'shikh temperaturnykh naporakh i raschet temperatury stenki)

PERIODICAL: Teploenergetika, 1958, Nr 9, pp 74 - 79 (USSR)

ABSTRACT: This article describes work undertaken to determine local heat-transfer coefficients and tube wall-temperatures when gas flows inside a strongly heated tube. The tests were carried out with a turbulent flow of air in a tube of steel Kh-18-N9T of 17.82 mm internal diameter, 2620 mm long, the tube being heated electrically. The measures necessary to ensure good thermal insulation of the tube and reliable determination of local thermal losses are described, also the instrumentation. Five series of tests were made with mean wall-temperatures ranging from 160 - 800°C. The maximum wall-temperature was 1,094°C. The inlet-air temperature was always 15 - 28°C and the

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outlet temperature did not exceed 579°C. The Reynolds number at the inlet section ranged from 1×10^5 to 6.4×10^5 and the Mach number from 0.34 - 0.65. The equations used to calculate the flow characteristics and local heat-transfer coefficients are given. The amount of heat generated per unit length of tube increased somewhat in the direction of flow, due to electric heater's increase of specific resistance with temperature. Changes in the local and mean heat-transfer coefficients along the length of the tube for certain conditions are shown in Fig 1. The test data obtained are compared with those of other authors and it will be seen from Fig 2 that agreement with Il'in's work is good but that the NACA report of 1951 gives lower results. However, within the range of Reynolds numbers 25,000 - 400,000 formula 6 is accurate enough. Formulae 7 and 8 represent the experimental data for local heat-transfer coefficients and mean coefficients to within $\pm 5\%$. In Figs 4 and 5, all the experimental data on local

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and mean heat transfer coefficients are compared with formulae 7 and 8. It will be seen that the formulae are generally applicable and that they represent the experimental results with considerable accuracy. This is important, because when the wall temperature is very high and the temperature drop from the wall to the gas is also high, a relatively small error in determination of the temperature difference may lead to the tube running dangerously hot. The article provides a simple method

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of calculating the change of wall temperature along the
length of a tube with the given thermal load distribution
and given gas conditions at inlet.

Thero are 6 figures, 5 literature references (3 Soviet,
2 English)

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut (All-Union
Thermo-technical Institute)

1. Gas flow--Thermodynamic properties   2. Heat transfer--Mathematical
analysis   3. Temperature--Determination   4. Mathematics--Appli-
cations

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DYADYAKIN, B. V., Candidate Tech Sci (diss) -- "Experimental investigation of thermal emission from a pipe wall to a gas, and of the hydraulic resistance in high-temperature heads". Moscow, 1959. 15 pp (Gosplan USSR, Soyuzglavenergo, All-Union Order of Labor Red Banner Heat-Engineering Sci Res Inst im F. E. Dzerzhinskiy), 130 copies (KL, No 23, 1959, 166)

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S/124/60/000/012/008/009
A005/A001

AUTHORS: Lel'chuk, V.L., Dyadyakin, B.V.

TITLE: The Heat Emission From the Wall to a Turbulent Air Stream Within a
Pipe and the Hydraulic Resistance at High Temperature Pressures

PERIODICAL: V sb.: Vopr. teploobmena. Moscow, AN SSSR, 1959, pp. 123-192

TEXT: An experimental investigation was conducted on the effect of the tem-
perature factor on the heat exchange and resistance at the turbulent air stream in
pipes. The authors present in their article a detailed description of the experi-
mental method and the experimental unit. The experiments were conducted with a
pipe of 17.82 mm in diameter and 2,620 mm length. The pipe was heated by direct
current supplied to its ends. The wall temperature was measured by thermocouples
applied to the external surface and insulated from the pipe wall by thin mica
layers. For measuring the hydraulic resistance, the pipe had 14 bores for sampling
the statical pressure. The R-number range ran from 1.17×10^5 to 6.45×10^5, that
of the temperature factor T_{st}/T from 1 to 2.5. As an experimental result, an em-
pirical formula was obtained taking into account the temperature factor effect:

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$$N = c\, R^m P^{0.4} \left(\frac{T}{T_{st}} \right)^p,$$

where c, m, and p are functions of x/D; the author propose to adopt their values
from the graphs presented. According to the expectations, the values of c and m
remain practically constant and equal to 0.025 and 0.8 respectively for x/D $>$ 10.
But the dependence of exponent p on x/D is preserved over the entire length of the
pipe up to x/D = 133. In other words, the authors state that no thermal stabiliza-
tion is observed at the heating of a gas in pipes at great temperature differences.
The latter circumstance is unexpected. Besides the measurement of heat emission,
the investigation was conducted of the temperature factor effect on the hydraulic
resistance. As a result it was obtained that the local resistance coefficient is

$$\xi = \frac{0.19}{R^{0.2}} \left(\frac{T}{T_{st}} \right)^J,$$

where exponent J = f(x/D) varies from -0.16 to +0.16 with the variation of x/D from

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from 11 to 70; for $x/D > 70$, its value remains constant. The article is completed by detailed tables of the primary experimental data and their processing. There are 8 references.

V.V. Kirillov

Translator's note: This is the full translation of the original Russian abstract.

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24(8)   PHASE I BOOK EXPLOITATION   SOV/3459

Moscow. Vsesoyuznyy teplotekhnicheskiy institut

Teploobmen pri vysokikh teplovykh nagruzkakh i drugikh spetsial'nykh usloviyakh; sbornik statey (Heat Exchange Under High Thermal Loads and Other Special Conditions; Collection of Articles) Moscow, Gosenergoizdat, 1959. 135 p. 4,000 copies printed.

Ed. (title page); A. A. Armand; Ed. (inside book); I. K. Karimovskiy; Tech. Ed.: G. T. Matveyev.

PURPOSE: The book is intended for personnel of scientific research institutes, planning and design organizations, and for power engineers.

COVERAGE: This collection of 9 articles presents the results of research conducted at the All-Union Heat Engineering Institute. Problems of heat exchange under high pressure and other special conditions are analyzed. Attention is devoted to special cases such as heat exchange from wall to water, including cases of ordinary and surface boiling; heat transfer to steam and water under super-critical parameters; heat exchange from pipe wall to gas under high pressure; and the hydraulic resistance of a heated tube. References are given at the end of each article.

2. Doroshchuk, V. Ye., and P. P. Frid. Investigation of Critical Heat Loads   23

3. Doroshchuk, V. Ye., V. I. Lel'chuk, and V. V. Modnikova. Heat Emis- sion to Water Under High Pressure   30

4. Armand A: A, V. N. I. Zhdanov, and A. S. Kontuv. Investigation of Heat Emission From Wall to Steam Near the Critical State   43

5. Treshchev, G. G. Experimental Investigation of the Mechanism of Surface Boiling   51

6. Dyadyakin B. V., and V. I. Lel'chuk. Experimental Investigation of Heat Emission From Tube Wall to Gas at High Temperature   66

7: Lel'chuk, V. I., and B. V. Dyadyakin. Experimental Determination of Hydraulic Resistance With Turbulent Flow of Air in a Heated Tube   91

8. Doroshchuk, V. Ye., and P. P. Frid. Investigation of Heat Emission in Annular Channels   101

9. Armand A. A. Calculation of Transient Processes in Heat Exchangers   113

AVAILABLE: Library of Congress (QC320.W66)

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DYADYAKIN, B.V.

24(6)

PHASE I BOOK EXPLOITATION   SOV/3501

Akademiya nauk SSSR. Energeticheskiy institut

Voprosy teploobmena (Heat-Exchange Problems) Moscow, 1959. 237 p. Errata slip inserted. 2,800 copies printed.

Resp. Ed.: M.A. Mikheyev, Academician; Ed. of Publishing House: G.B. Gornikov; Tech. Ed.: I.P. Kuz'min.

PURPOSE: This collection of articles is intended for scientific workers, engineers, and postgraduate students specializing in thermodynamics.

COVERAGE: The collection reviews problems of heat transfer and explores possibilities of intensifying heat exchange. The heat exchange theory is outlined, and Russian scientists who contributed to its development are mentioned. Thermophysical properties of some molten metals and alloys are analyzed, and methods used to determine them presented. Equipment used for measuring thermal conductivity, heat capacity, and kinetic viscosity of these metals are discussed. Results of experimental study of the intensified heat exchange for water flow in an annular channel are analyzed and the instruments used along with the pilot plant for studying convection heat exchange in contacting noncloisible fluids are described. Instruments and equipment used for determining the linear expansion of metals, the consumption of a liquid, and the absorption capacity of a surface are also described and illustrated. A number of equations for solving various thermodynamic problems are presented. Each article is accompanied by references, the majority of which are Soviet.

TABLE OF CONTENTS:

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